

REMARKS

This Amendment is submitted in response to the non-final Office Action mailed on April 14, 2004. Claims 2 and 5-24 are pending, claims 7, 8, 12, 13, 21, 23 and 24 have been cancelled, claims 5, 10, 15, 16 and 22 have been amended, and claims 25-32 are new. Applicants note with appreciation the Examiner's indication of allowed subject matter in claims 16-19 and allowable subject matter in claims 7, 8, 12, 13, 15 and 21-24. In view of the foregoing amendments and the following remarks, Applicants respectfully submit that this application is in complete condition for allowance and request reconsideration of the application in this regard.

Rejection of Claims Under 35 U.S.C. § 102

Claims 2, 5, 6, 9, 10, 11, 14, and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,786,183 (Cadeo). Of the rejected claims, claims 5 and 10 are the only independent claims. The Examiner contends that Cadeo shows or teaches all the elements of the rejected claims, which is an absolute requirement for anticipation under 35 U.S.C. § 102. Applicants respectfully disagree for the reasons set forth below.

Cadeo is concerned with a mixing apparatus that generates as large as possible turbulence in the two liquids to be mixed. To achieve this and with reference to Figure 1 of Cadeo, a first component current flows in the direction of arrow (4) as described at column 2, line 25 and a second component current flows in the direction of

arrow (5). Both component currents are accelerated radially and tangentially. After losing contact with the pump impellers (1) and (2) as shown in Figure 1, the two component currents (4, 5) form disc shaped bodies (6, 7) consisting of the medium that contact each other at point (8) as described at column 2, line 49. There is not contact of the two component currents in the space between the pump impellers (1,2), so that no shearing forces are applied.

This is in direct contrast with the language set forth in Applicants' independent claim 5, as amended, that states that "the rotatable element and the rotor are arranged relative to each other such that a shearing force is applied to the free-flowing substance passing between the rotatable element and the rotor, a magnitude of the shearing force being dependent upon the relative speed of the rotatable element and the rotor." In order for a reference to anticipate the invention in a claim, the reference must teach each and every element in the precise arrangement set forth in the claim. If the reference fails to teach even one of the claimed elements, the reference does not and cannot anticipate the claimed invention. Cadeo does not disclose or suggest that the rotatable element and the rotor are arranged to apply a shear force to the free-flowing substance. Moreover, Cadeo does not disclose or suggest that the shear rate may be controlled by controlling the relative speed of the rotatable element and the rotor. For at least these reasons, Applicants respectfully request that this rejection be withdrawn.

Because claims 2, 6, 9 and 14 depend from independent claim 5, Applicants submit that those claims are also patentable for at least the same reasons

discussed above. Furthermore, these claims recite unique combinations of elements not taught, disclosed or suggested by Cadeo.

Independent claim 10, as amended, is patentable for at least the same or similar reasons as independent claim 5. Specifically, Cadeo does not disclose or suggest that the rotatable element and the rotor are arranged to apply a shear force to the free-flowing substance nor that the shear rate may be controlled by controlling the relative speed of the rotatable element and the rotor. Therefore, for at least these reasons, Applicants respectfully request that this rejection be withdrawn.

Because claims 11 and 20 depend from independent claim 10, Applicants submit that these claims are also patentable for at least the same reasons discussed above. Furthermore, these claims recite unique combinations of elements not taught, disclosed or suggested by Cadeo.

New Claims

Claims 25-32 have been added as new claims. With regard to claims 25-31, the Examiner objected to claims 7, 8, 12, 13, 15 and 21-24 as depending upon a rejected independent claim 1. As suggested by the Examiner, Applicants have elected to rewrite dependent claims 7, 8, 12, 13, 21, 23 and 24 as new independent claims 25-31, respectively. Allowable dependent claims 15 and 22 now depend from new independent claims 26 and 29, respectively. Claim 32 is similar in scope to independent claim 10, as amended, and is patentable for at least the same reasons as claim 10.

Conclusion

Applicants have made a bona fide effort to respond to each and every requirement set forth in the Office Action. In the event that any issues remain outstanding, the Examiner is invited to contact the undersigned to expedite issuance of this application.

Applicants do not believe fees are due in connection with filing this communication other than the excess claims fee. If, however, additional fees are necessary as a result of this communication, the Commissioner is hereby authorized to charge any under-payment or fees associated with this communication or credit any over-payment to Deposit Account No. 23-3000.

Respectfully submitted,
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